

# **O. P. JINDAL SCHOOL, RAIGARH (CG), INDIA**

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## **PRACTISE ASSIGNMENT-2024**

### **CLASS – X**

Dear students,

You really need work hard to improve your writing skill. On regular days your daily routine is so tight that, you hardly get any time to work upon the areas where you need improvement. Holidays are the best period to enjoy, take rest as well as to do take efforts to remove weaknesses. These practice assignments have been designed carefully, so that you can utilise your time to get the best benefits.

Sr. Mistress

Bhabani Nande

#### **GENERAL INSTRUCTIONS: -**

- ❖ Date wise solve 10 sums of Maths in your class work copy every day.
- ❖ At least 2 questions of Bio and 1 question of Physics and Chemistry to be written every day.
- ❖ Social Science project is SEA and carries 5 marks and the last date to submit your project is 25/10/24.
- ❖ One page in English, Hindi/ Sanskrit to be written in class work copies, with date.

### **ENGLISH**

- Q. 1.** Write your views on the motherly conduct in the story, 'His First Flight'.  
(120 words)
- Q. 2.** Anne wanted to write convincing arguments to prove the necessity of talking. What does this tell you about her? Did she possess a sense of freedom? Explain in 120 words.
- Q. 3.** You are Tanvi/Shirish of Safadargunj Development Area, New Delhi.  
You are extremely disturbed about the attacks on old people living alone. Write a *letter to the Editor* 'The New Indian News' making people sensitive to the problem. Make suggestion to the people living alone & the authorities to ensure that such attacks do not take place. (120 words)

## HINDI

- Q. 1. किसी एक विषय बिंदु पर १२० से १५० शब्दों में अनुच्छेद-लेखन कीजिए-  
(क) **भारत में पर्यटन-**  
\*संकेत बिंदु\* पर्यटन की भूमिका, प्रमुख पर्यटन स्थल, पर्यटन का महत्व।  
(ख) **अंधविश्वास और भारतीय समाज :**  
\*संकेत बिंदु\* अंधविश्वास का कारण (शिक्षा की कमी, जानकारी का अभाव, धर्म का प्रभाव), आपका वैज्ञानिक दृष्टिकोण, आपकी भूमिका।
- Q. 2. आप किदवई नगर, कानपुर निवासी मोहन/मोहिनी हैं। आपके क्षेत्र में बिजली के पैनल बॉक्स खुले पड़े हैं जो बच्चों के लिए खतरनाक सिद्ध हो सकते हैं। एक जागरूक नागरिक होने के नाते विद्युत आपूर्ति कंपनी के अभियंता को पत्र लिखकर इसे ठीक करने का सुझाव दीजिए।
- Q. 3. नमकीन बनाने वाली कंपनी \*स्वाद\* अपना आकर्षक विज्ञापन बनवाना चाहती है। इसके लिए आप लगभग ४० शब्दों में एक आकर्षक विज्ञापन तैयार कीजिए।
- Q. 4. राष्ट्रीय हॉकी टीम में चयनित होने पर अपने चाचाजी को लगभग ४० शब्दों में **बधाई संदेश** लिखिए।
- Q. 5. आप श्रेय/श्रेया हैं। आपने मनोहर प्रकाशन नई दिल्ली से व्याकरण की पुस्तक मंगाई थी, जो प्राप्त नहीं हुई है। एक ई-मेल भेजकर उन्हें इस आशय की सूचना दीजिए कि आपकी पुस्तक तत्काल भेज दें।

## SANSKRIT

- Q. 1. कांचित् पंच अपठितगद्यांशानाम् अभ्यासं उत्तरपुस्तिकायां कुर्वन्तु।
- Q. 2. कानिचित् पंचपत्राणाम् अभ्यासं उत्तरपुस्तिकायां कुर्वन्तु।
- Q. 3. कानिचित् पंच चित्राणाम् अभ्यासं उत्तरपुस्तिकायां कुर्वन्तु।

## MATHEMATICS

- Q. 1. Evaluate:  $(\sec^2 A - 1)(1 - \operatorname{cosec}^2 A)$ .
- Q. 2. Prove that:  $\sec^2 \theta + \operatorname{cosec}^2 \theta = \sec^2 \theta \operatorname{cosec}^2 \theta$ .
- Q. 3. Prove that:  $(\sin \theta + \sec \theta)^2 + (\cos \theta + \operatorname{cosec} \theta)^2 = (1 + \sec \theta \cdot \operatorname{cosec} \theta)^2$ .
- Q. 4. Prove that:  $\frac{\sin \theta - 2 \sin^3 \theta}{2 \cos^3 \theta - \cos \theta} = \tan \theta$

Q. 5. Show that:  $\frac{\operatorname{cosec} \theta + \cot \theta}{\operatorname{cosec} \theta - \cot \theta} = 1 + 2 \cot^2 \theta + 2 \operatorname{cosec} \theta \cot \theta$ .

Q. 6. Prove that:  $\frac{\tan A + \sec A - 1}{\tan A - \sec A + 1} = \frac{1 + \sin A}{\cos A}$

Q. 7. Prove that:  $\frac{\sin \theta - \cos \theta}{\sin \theta + \cos \theta} + \frac{\sin \theta + \cos \theta}{\sin \theta - \cos \theta} = \frac{2}{2 \sin^2 \theta - 1}$ .

Q. 8. If  $\sin \theta + \sin^2 \theta = 1$ , then prove that  $\cos^2 \theta + \cos^4 \theta = 1$ .

Q. 9. Prove that:  $\frac{1}{\operatorname{cosec} \theta - \cot \theta} - \frac{1}{\sin \theta} = \frac{1}{\sin \theta} - \frac{1}{\operatorname{cosec} \theta + \cot \theta}$ .

Q. 10. Prove that:  $\frac{\cos A}{1 - \tan A} - \frac{\sin^2 A}{\cos A - \sin A} = \sin A + \cos A$ .

Q. 11. Prove that:  $\frac{\sin \theta + \cos \theta}{\sin \theta - \cos \theta} \frac{\sin \theta - \cos \theta}{\sin \theta + \cos \theta} = \frac{2 \sec^2 \theta}{\tan^2 \theta - 1}$ .

Q. 12. Show that:  $\left(1 + \frac{1}{\tan^2 \theta}\right) \left(1 + \frac{1}{\cot^2 \theta}\right) = \frac{1}{\sin^2 \theta - \sin^4 \theta}$ .

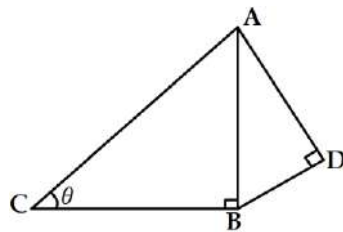
Q. 13. Show that:  $\sec^4 \theta (1 - \sin^4 \theta) - 2 \tan^2 \theta = 1$ .

Q. 14. If  $\tan A = \frac{5}{12}$ , find the value of  $(\sin A + \cos A) \sec A$ .

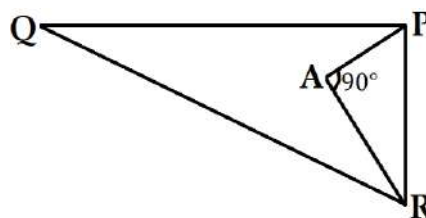
Q. 15. Prove that:  $(1 + \cot A + \tan A)(\sin A - \cos A) = \sin A \tan A - \cot A \cos A$ .

Q. 16. Prove that:  $\frac{\cot A - \cos A}{\cot A + \cos A} = \frac{\operatorname{cosec} A - 1}{\operatorname{cosec} A + 1}$

Q. 17. In figure,  $AD = 4 \text{ cm}$ ,  $BD = 3 \text{ cm}$  and  $CB = 12 \text{ cm}$ , find  $\cot \theta$ .



Q. 18. In figure,  $PQ = 24 \text{ cm}$ ,  $QR = 26 \text{ cm}$ ,  $\angle PAR = 90^\circ$ ,  $PA = 6 \text{ cm}$  and  $AR = 8 \text{ cm}$ . Find  $\angle QPR$ .



Q. 19. If  $\sin \theta = \frac{1}{3}$ , then find the value of  $(2 \cot^2 \theta + 2)$ .

Q. 20. Prove that:  $\sec^2 \theta - \frac{\sin^2 \theta - 2 \sin^4 \theta}{2 \cos^4 \theta - \cos^2 \theta} = 1$

## SCIENCE

- Q. 1.** State Ohm's law. How can it be verified experimentally? Does it hold good under all conditions? Comment.
- Q. 2.** Should the resistance of an ammeter be low or high? Give reason.
- Q. 3.** Calculate the potential difference between two points, if 1500 J of work is done to carry a charge of 50C from one point to another.
- Q. 4.** What is the difference between electric potential and electric potential difference.
- Q. 5.** Explain the formation of any four ionic compounds with electron dot structure.
- Q. 6.**
- a. If an iron nail is immersed in the aqueous solution of copper sulphate, what changes are happening to the nail and the solution?
  - b. Write the balanced chemical equation for the reaction between iron metal and aqueous solution of copper sulphate.
- Q. 7.** 1 g of copper powder was taken in a China dish and heated. What change takes place in heating? When hydrogen gas is passed over this heated substance, a visible change is seen in it. Give the chemical equations of reactions, the name and the colour of the products formed in each case.
- Q. 8.** State the reason for the following:
- (i) Aluminium oxide is called an amphoteric oxide.
  - (ii) An iron strip dipped in a blue copper sulphate solution turns the blue solution pale green.
  - (iii) Hydrogen gas is not evolved when most metals react with nitric acid.
  - (iv) Calcium does not occur in a free state in nature.
  - (v) Sodium or potassium metals are kept immersed under kerosene.
- Q. 9.** Draw and show the location of various endocrine glands in a human body.
- Q. 10.** Name the disorders seen in human body due to malfunctioning of the following hormones -
- a) Growth Hormone
  - b) Releasing hormone
  - c) Insulin
  - d) Melatonin
  - e) Thyroxin
- Q. 11** Name the plant hormones and write their functions.
- Q. 12.** Compare between Nervous system and Endocrine system.

## SOCIAL SCIENCE

- Q. 1. Write two features of accordion book.
- Q. 2. Describe two contributions of Marco Polo in the field of print culture.
- Q. 3. “The production of handwritten manuscripts could not satisfy the ever-increasing demand for books. Describe in that context why there was increase of demand of books?”
- Q. 4. Explain the role of Gutenberg to develop the first printing press.
- Q. 5. Write a few features of the book printed by Gutenberg.
- Q. 6. “Not everyone welcomed the printed book and those who did also had fears about it” Explain.
- Q. 7. “Printing is the ultimate gift of God and the greatest one” Explain.
- Q. 8. “Print and popular religious literature stimulated many distinctive individual interpretations of among little –educated working people.” Write a few lines about Menocchio in that context.
- Q. 9. Describe how ideas of scientists did and philosophers become more accessible to common people after the beginning of print culture.
- Q. 10. Many historians have argued that print culture created the conditions within which French Revolution occurred.” Explain.
- Q. 11 Write about different innovations in the printing technology during the nineteenth century.

**We wish you success and a rewarding research experience!**

**Best regards!**